

SEQUENCE LISTING

<110> Agensys, Inc.  
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Challita-Eid, Pia M.  
Ge, Wangmao  
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Steven B. Kanner  
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<120> Nucleic Acids and Corresponding Proteins  
Entitled 254P1D6B Useful in Treatment and Detection of  
Cancer

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Gly Asp Ser Pro Ala Val Pro Ala Glu Thr Gln Gln Asp Pro Glu Leu			
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His Tyr Leu Asn Glu Ser Ala Ser Thr Pro Ala Pro Lys Leu Pro Glu			
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Leu Glu Lys Glu Lys Ala Ser Gln Leu Gln Glu Gln Ser Ser Asn Ser			
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Thr	Pro	Gly	Ser	Thr	Glu	His	Ser	Ile	Pro	Thr	Pro	Pro	Thr	Ser	Ala
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gcc	ccc	tct	gag	tcc	acc	cca	tct	gag	cta	ccc	ata	tct	cct	acc	act
Ala	Pro	Ser	Glu	Ser	Thr	Pro	Ser	Glu	Leu	Pro	Ile	Ser	Pro	Thr	Thr
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Ala	Pro	Arg	Thr	Val	Lys	Glu	Leu	Thr	Val	Ser	Ala	Gly	Asp	Asn	Leu
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Ile	Ile	Thr	Leu	Pro	Asp	Asn	Glu	Val	Glu	Ile	Lys	Ala	Phe	Val	Ala
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Pro Gly Ser Glu Gly Lys His Val Val Met Gln Gly Val Gln Thr Pro			
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Tyr Leu His Leu Ser Ala Met Gln Glu Gly Asp Tyr Thr Phe Gln Leu			
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Lys Val Thr Asp Ser Ser Arg Gln Gln Ser Thr Ala Xaa Val Thr Val			
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Asp Lys Glu Leu Ile Phe Pro Val Glu Ser Ala Thr Leu Asp Gly Ser			
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 Glu Gly Phe Val Asn Val Thr Val Lys Pro Ala Arg Arg Val Asn Leu  
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75 80 85	
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315 320 325	

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Leu Ile Asp Gly Ser Gln Ser Thr Asp Asp Thr Glu Ile Val Ser Tyr		
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His Trp Glu Glu Ile Asn Gly Pro Phe Ile Glu Glu Lys Thr Ser Val		
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Asp Ser Pro Val Leu Arg Leu Ser Asn Leu Asp Pro Gly Asn Tyr Ser		
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Phe Arg Leu Thr Val Thr Asp Ser Asp Gly Ala Thr Asn Ser Thr Thr		
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Gln Thr Pro Tyr Leu His Leu Ser Ala Met Gln Glu Gly Asp Tyr Thr		
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Val Thr Val Ile Val Gln Pro Glu Asn Asn Arg Pro Pro Val Ala Val		
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Asp Gly Ser Ser Ser Asp Asp His Gly Ile Val Phe Tyr His Trp		
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tca agg tct act gat gac caa aga att gtg tcc tat ctg tgg atc cg <sup>g</sup>		2979	
Ser Arg Ser Thr Asp Asp Gln Arg Ile Val Ser Tyr Leu Trp Ile Arg			
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Asp Gly Gln Ser Pro Ala Ala Gly Asp Val Ile Asp Gly Ser Asp His			
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Ser Val Ala Leu Gln Leu Thr Asn Leu Val Glu Gly Val Tyr Thr Phe			
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His Leu Arg Val Thr Asp Ser Gln Gly Ala Ser Asp Thr Asp Thr Ala			
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Thr Val Glu Val Gln Pro Asp Pro Arg Lys Ser Gly Leu Val Glu Leu			
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acc ctg cag gtt ggt gtt ggg cag ctg aca gag cag cg <sup>g</sup> aag gac acc		3219	
Thr Leu Gln Val Gly Val Gly Gln Leu Thr Glu Gln Arg Lys Asp Thr			
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Leu Val Arg Gln Leu Ala Val Leu Leu Asn Val Leu Asp Ser Asp Ile			
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Lys Val Gln Lys Ile Arg Ala His Ser Asp Leu Ser Thr Val Ile Val			
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Phe Tyr Val Gln Ser Arg Pro Pro Phe Lys Val Leu Lys Ala Ala Glu			
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Val Ala Arg Asn Leu His Met Arg Leu Ser Lys Glu Lys Ala Asp Phe			
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 Pro Val Gln Arg Pro Ala Gln Leu Leu Asp Tyr Gly Asp Met Met Leu  
   100                 105                     110  
 Asn Arg Gly Ser Pro Ser Gly Ile Trp Gly Asp Ser Pro Glu Asp Ile  
   115                 120                     125  
 Arg Lys Asp Leu Pro Phe Leu Gly Lys Asp Trp Gly Leu Glu Glu Met  
   130                 135                     140  
 Ser Glu Tyr Ser Asp Asp Tyr Arg Glu Leu Glu Lys Asp Leu Leu Gln  
   145                 150                     155                     160  
 Pro Ser Gly Lys Gln Glu Pro Arg Gly Ser Ala Glu Tyr Thr Asp Trp  
   165                 170                     175  
 Gly Leu Leu Pro Gly Ser Glu Gly Ala Phe Asn Ser Ser Val Gly Asp  
   180                 185                     190  
 Ser Pro Ala Val Pro Ala Glu Thr Gln Gln Asp Pro Glu Leu His Tyr  
   195                 200                     205  
 Leu Asn Glu Ser Ala Ser Thr Pro Ala Pro Lys Leu Pro Glu Arg Ser  
   210                 215                     220  
 Val Leu Leu Pro Leu Pro Thr Thr Pro Ser Ser Gly Glu Val Leu Glu  
   225                 230                     235                     240  
 Lys Glu Lys Ala Ser Gln Leu Gln Glu Gln Ser Ser Asn Ser Ser Gly  
   245                 250                     255  
 Lys Glu Val Leu Met Pro Ser His Ser Leu Pro Pro Ala Ser Leu Glu  
   260                 265                     270  
 Leu Ser Ser Val Thr Val Glu Lys Ser Pro Val Leu Thr Val Thr Pro  
   275                 280                     285  
 Gly Ser Thr Glu His Ser Ile Pro Thr Pro Pro Thr Ser Ala Ala Pro  
   290                 295                     300

Ser Glu Ser Thr Pro Ser Glu Leu Pro Ile Ser Pro Thr Thr Ala Pro  
 305 310 315 320  
 Arg Thr Val Lys Glu Leu Thr Val Ser Ala Gly Asp Asn Leu Ile Ile  
 325 330 335  
 Thr Leu Pro Asp Asn Glu Val Glu Leu Lys Ala Phe Val Ala Pro Ala  
 340 345 350  
 Pro Pro Val Glu Thr Thr Tyr Asn Tyr Glu Trp Asn Leu Ile Ser His  
 355 360 365  
 Pro Thr Asp Tyr Gln Gly Glu Ile Lys Gln Gly His Lys Gln Thr Leu  
 370 375 380  
 Asn Leu Ser Gln Leu Ser Val Gly Leu Tyr Val Phe Lys Val Thr Val  
 385 390 395 400  
 Ser Ser Glu Asn Ala Phe Gly Glu Gly Phe Val Asn Val Thr Val Lys  
 405 410 415  
 Pro Ala Arg Arg Val Asn Leu Pro Pro Val Ala Val Val Ser Pro Gln  
 420 425 430  
 Leu Gln Glu Leu Thr Leu Pro Leu Thr Ser Ala Leu Ile Asp Gly Ser  
 435 440 445  
 Gln Ser Thr Asp Asp Thr Glu Ile Val Ser Tyr His Trp Glu Glu Ile  
 450 455 460  
 Asn Gly Pro Phe Ile Glu Glu Lys Thr Ser Val Asp Ser Pro Val Leu  
 465 470 475 480  
 Arg Leu Ser Asn Leu Asp Pro Gly Asn Tyr Ser Phe Arg Leu Thr Val  
 485 490 495  
 Thr Asp Ser Asp Gly Ala Thr Asn Ser Thr Thr Ala Ala Leu Ile Val  
 500 505 510  
 Asn Asn Ala Val Asp Tyr Pro Pro Val Ala Asn Ala Gly Pro Asn His  
 515 520 525  
 Thr Ile Thr Leu Pro Gln Asn Ser Ile Thr Leu Asn Gly Asn Gln Ser  
 530 535 540  
 Ser Asp Asp His Gln Ile Val Leu Tyr Glu Trp Ser Leu Gly Pro Gly  
 545 550 555 560  
 Ser Glu Gly Lys His Val Val Met Gln Gly Val Gln Thr Pro Tyr Leu  
 565 570 575  
 His Leu Ser Ala Met Gln Glu Gly Asp Tyr Thr Phe Gln Leu Lys Val  
 580 585 590  
 Thr Asp Ser Ser Arg Gln Gln Ser Thr Ala Val Val Thr Val Ile Val  
 595 600 605  
 Gln Pro Glu Asn Asn Arg Pro Pro Val Ala Val Ala Gly Pro Asp Lys  
 610 615 620  
 Glu Leu Ile Phe Pro Val Glu Ser Ala Thr Leu Asp Gly Ser Ser Ser  
 625 630 635 640  
 Ser Asp Asp His Gly Ile Val Phe Tyr His Trp Glu His Val Arg Gly  
 645 650 655  
 Pro Ser Ala Val Glu Met Glu Asn Ile Asp Lys Ala Ile Ala Thr Val  
 660 665 670  
 Thr Gly Leu Gln Val Gly Thr Tyr His Phe Arg Leu Thr Val Lys Asp  
 675 680 685  
 Gln Gln Gly Leu Ser Ser Thr Ser Thr Leu Thr Val Ala Val Lys Lys  
 690 695 700  
 Glu Asn Asn Ser Pro Pro Arg Ala Arg Ala Gly Gly Arg His Val Leu  
 705 710 715 720  
 Val Leu Pro Asn Asn Ser Ile Thr Leu Asp Gly Ser Arg Ser Thr Asp  
 725 730 735  
 Asp Gln Arg Ile Val Ser Tyr Leu Trp Ile Arg Asp Gly Gln Ser Pro  
 740 745 750  
 Ala Ala Gly Asp Val Ile Asp Gly Ser Asp His Ser Val Ala Leu Gln  
 755 760 765  
 Leu Thr Asn Leu Val Glu Gly Val Tyr Thr Phe His Leu Arg Val Thr  
 770 775 780  
 Asp Ser Gln Gly Ala Ser Asp Thr Asp Thr Ala Thr Val Glu Val Gln  
 785 790 795 800  
 Pro Asp Pro Arg Lys Ser Gly Leu Val Glu Leu Thr Leu Gln Val Gly  
 805 810 815

Val Gly Gln Leu Thr Glu Gln Arg Lys Asp Thr Leu Val Arg Gln Leu  
       820                 825                 830  
 Ala Val Leu Leu Asn Val Leu Asp Ser Asp Ile Lys Val Gln Lys Ile  
       835                 840                 845  
 Arg Ala His Ser Asp Leu Ser Thr Val Ile Val Phe Tyr Val Gln Ser  
       850                 855                 860  
 Arg Pro Pro Phe Lys Val Leu Lys Ala Ala Glu Val Ala Arg Asn Leu  
       865                 870                 875                 880  
 His Met Arg Leu Ser Lys Glu Lys Ala Asp Phe Leu Leu Phe Lys Val  
       885                 890                 895  
 Leu Arg Val Asp Thr Ala Gly Cys Leu Leu Lys Cys Ser Gly His Gly  
       900                 905                 910  
 His Cys Asp Pro Leu Thr Lys Arg Cys Ile Cys Ser His Leu Trp Met  
       915                 920                 925  
 Glu Asn Leu Ile Gln Arg Tyr Ile Trp Asp Gly Glu Ser Asn Cys Glu  
       930                 935                 940  
 Trp Ser Ile Phe Tyr Val Thr Val Leu Ala Phe Thr Leu Ile Val Leu  
       945                 950                 955                 960  
 Thr Gly Gly Phe Thr Trp Leu Cys Ile Cys Cys Cys Lys Arg Gln Lys  
       965                 970                 975  
 Arg Thr Lys Ile Arg Lys Lys Thr Lys Tyr Thr Ile Leu Asp Asn Met  
       980                 985                 990  
 Asp Glu Gln Glu Arg Met Glu Leu Arg Pro Lys Tyr Gly Ile Lys His  
       995                 1000                1005  
 Arg Ser Thr Glu His Asn Ser Ser Leu Met Val Ser Glu Ser Glu Phe  
       1010                1015                1020  
 Asp Ser Asp Gln Asp Thr Ile Phe Ser Arg Glu Lys Met Glu Arg Gly  
       1025                1030                1035                1040  
 Asn Pro Lys Val Ser Met Asn Gly Ser Ile Arg Asn Gly Ala Ser Phe  
       1045                1050                1055  
 Ser Tyr Cys Ser Lys Asp Arg  
       1060

<210> 8  
 <211> 1072  
 <212> PRT  
 <213> Homo sapiens

<400> 8  
 Met Ala Pro Pro Thr Gly Val Leu Ser Ser Leu Leu Leu Val Thr  
   1                  5                 10                 15  
 Ile Ala Gly Cys Ala Arg Lys Gln Cys Ser Glu Gly Arg Thr Tyr Ser  
   20                 25                 30  
 Asn Ala Val Ile Ser Pro Asn Leu Glu Thr Thr Arg Ile Met Arg Val  
   35                 40                 45  
 Ser His Thr Phe Pro Val Val Asp Cys Thr Ala Ala Cys Cys Asp Leu  
   50                 55                 60  
 Ser Ser Cys Asp Leu Ala Trp Trp Phe Glu Gly Arg Cys Tyr Leu Val  
   65                 70                 75                 80  
 Ser Cys Pro His Lys Glu Asn Cys Glu Pro Lys Lys Met Gly Pro Ile  
   85                 90                 95  
 Arg Ser Tyr Leu Thr Phe Val Leu Arg Pro Val Gln Arg Pro Ala Gln  
   100                105                110  
 Leu Leu Asp Tyr Gly Asp Met Met Leu Asn Arg Gly Ser Pro Ser Gly  
   115                120                125  
 Ile Trp Gly Asp Ser Pro Glu Asp Ile Arg Lys Asp Leu Pro Phe Leu  
   130                135                140  
 Gly Lys Asp Trp Gly Leu Glu Glu Met Ser Glu Tyr Ser Asp Asp Tyr  
   145                150                155                160  
 Arg Glu Leu Glu Lys Asp Leu Leu Gln Pro Ser Gly Lys Gln Glu Pro  
   165                170                175  
 Arg Gly Ser Ala Glu Tyr Thr Asp Trp Gly Leu Leu Pro Gly Ser Glu  
   180                185                190

Gly Ala Phe Asn Ser Ser Val Gly Asp Ser Pro Ala Val Pro Ala Glu  
                  195                 200                 205  
 Thr Gln Gln Asp Pro Glu Leu His Tyr Leu Asn Glu Ser Ala Ser Thr  
                  210                 215                 220  
 Pro Ala Pro Lys Leu Pro Glu Arg Ser Val Leu Leu Pro Leu Pro Thr  
                  225                 230                 235                 240  
 Thr Pro Ser Ser Gly Glu Val Leu Glu Lys Glu Lys Ala Ser Gln Leu  
                  245                 250                 255  
 Gln Glu Gln Ser Ser Asn Ser Ser Gly Lys Glu Val Leu Met Pro Ser  
                  260                 265                 270  
 His Ser Leu Pro Pro Ala Ser Leu Glu Leu Ser Ser Val Thr Val Glu  
                  275                 280                 285  
 Lys Ser Pro Val Leu Thr Val Thr Pro Gly Ser Thr Glu His Ser Ile  
                  290                 295                 300  
 Pro Thr Pro Pro Thr Ser Ala Ala Pro Ser Glu Ser Thr Pro Ser Glu  
                  305                 310                 315                 320  
 Leu Pro Ile Ser Pro Thr Thr Ala Pro Arg Thr Val Lys Glu Leu Thr  
                  325                 330                 335  
 Val Ser Ala Gly Asp Asn Leu Ile Ile Thr Leu Pro Asp Asn Glu Val  
                  340                 345                 350  
 Glu Leu Lys Ala Phe Val Ala Pro Ala Pro Pro Val Glu Thr Thr Tyr  
                  355                 360                 365  
 Asn Tyr Glu Trp Asn Leu Ile Ser His Pro Thr Asp Tyr Gln Gly Glu  
                  370                 375                 380  
 Ile Lys Gln Gly His Lys Gln Thr Leu Asn Leu Ser Gln Leu Ser Val  
                  385                 390                 395                 400  
 Gly Leu Tyr Val Phe Lys Val Thr Val Ser Ser Glu Asn Ala Phe Gly  
                  405                 410                 415  
 Glu Gly Phe Val Asn Val Thr Val Lys Pro Ala Arg Arg Val Asn Leu  
                  420                 425                 430  
 Pro Pro Val Ala Val Val Ser Pro Gln Leu Gln Glu Leu Thr Leu Pro  
                  435                 440                 445  
 Leu Thr Ser Ala Leu Ile Asp Gly Ser Gln Ser Thr Asp Asp Thr Glu  
                  450                 455                 460  
 Ile Val Ser Tyr His Trp Glu Glu Ile Asn Gly Pro Phe Ile Glu Glu  
                  465                 470                 475                 480  
 Lys Thr Ser Val Asp Ser Pro Val Leu Arg Leu Ser Asn Leu Asp Pro  
                  485                 490                 495  
 Gly Asn Tyr Ser Phe Arg Leu Thr Val Thr Asp Ser Asp Gly Ala Thr  
                  500                 505                 510  
 Asn Ser Thr Thr Ala Ala Leu Ile Val Asn Asn Ala Val Asp Tyr Pro  
                  515                 520                 525  
 Pro Val Ala Asn Ala Gly Pro Asn His Thr Ile Thr Leu Pro Gln Asn  
                  530                 535                 540  
 Ser Ile Thr Leu Asn Gly Asn Gln Ser Ser Asp Asp His Gln Ile Val  
                  545                 550                 555                 560  
 Leu Tyr Glu Trp Ser Leu Gly Pro Gly Ser Glu Gly Lys His Val Val  
                  565                 570                 575  
 Met Gln Gly Val Gln Thr Pro Tyr Leu His Leu Ser Ala Met Gln Glu  
                  580                 585                 590  
 Gly Asp Tyr Thr Phe Gln Leu Lys Val Thr Asp Ser Ser Arg Gln Gln  
                  595                 600                 605  
 Ser Thr Ala Val Val Thr Val Ile Val Gln Pro Glu Asn Asn Arg Pro  
                  610                 615                 620  
 Pro Val Ala Val Ala Gly Pro Asp Lys Glu Leu Ile Phe Pro Val Glu  
                  625                 630                 635                 640  
 Ser Ala Thr Leu Asp Gly Ser Ser Ser Asp Asp His Gly Ile Val  
                  645                 650                 655  
 Phe Tyr His Trp Glu His Val Arg Gly Pro Ser Ala Val Glu Met Glu  
                  660                 665                 670  
 Asn Ile Asp Lys Ala Ile Ala Thr Val Thr Gly Leu Gln Val Gly Thr  
                  675                 680                 685  
 Tyr His Phe Arg Leu Thr Val Lys Asp Gln Gln Gly Leu Ser Ser Thr  
                  690                 695                 700

Ser Thr Leu Thr Val Ala Val Lys Lys Glu Asn Asn Ser Pro Pro Arg  
 705 710 715 720  
 Ala Arg Ala Gly Gly Arg His Val Leu Val Leu Pro Asn Asn Ser Ile  
 725 730 735  
 Thr Leu Asp Gly Ser Arg Ser Thr Asp Asp Gln Arg Ile Val Ser Tyr  
 740 745 750  
 Leu Trp Ile Arg Asp Gly Gln Ser Pro Ala Ala Gly Asp Val Ile Asp  
 755 760 765  
 Gly Ser Asp His Ser Val Ala Leu Gln Leu Thr Asn Leu Val Glu Gly  
 770 775 780  
 Val Tyr Thr Phe His Leu Arg Val Thr Asp Ser Gln Gly Ala Ser Asp  
 785 790 795 800  
 Thr Asp Thr Ala Thr Val Glu Val Gln Pro Asp Pro Arg Lys Ser Gly  
 805 810 815  
 Leu Val Glu Leu Thr Leu Gln Val Gly Val Gly Gln Leu Thr Glu Gln  
 820 825 830  
 Arg Lys Asp Thr Leu Val Arg Gln Leu Ala Val Leu Leu Asn Val Leu  
 835 840 845  
 Asp Ser Asp Ile Lys Val Gln Lys Ile Arg Ala His Ser Asp Leu Ser  
 850 855 860  
 Thr Val Ile Val Phe Tyr Val Gln Ser Arg Pro Pro Phe Lys Val Leu  
 865 870 875 880  
 Lys Ala Ala Glu Val Ala Arg Asn Leu His Met Arg Leu Ser Lys Glu  
 885 890 895  
 Lys Ala Asp Phe Leu Leu Phe Lys Val Leu Arg Val Asp Thr Ala Gly  
 900 905 910  
 Cys Leu Leu Lys Cys Ser Gly His Gly His Cys Asp Pro Leu Thr Lys  
 915 920 925  
 Arg Cys Ile Cys Ser His Leu Trp Met Glu Asn Leu Ile Gln Arg Tyr  
 930 935 940  
 Ile Trp Asp Gly Glu Ser Asn Cys Glu Trp Ser Ile Phe Tyr Val Thr  
 945 950 955 960  
 Val Leu Ala Phe Thr Leu Ile Val Leu Thr Gly Gly Phe Thr Trp Leu  
 965 970 975  
 Cys Ile Cys Cys Lys Arg Gln Lys Arg Thr Lys Ile Arg Lys Lys  
 980 985 990  
 Thr Lys Tyr Thr Ile Leu Asp Asn Met Asp Glu Gln Glu Arg Met Glu  
 995 1000 1005  
 Leu Arg Pro Lys Tyr Gly Ile Lys His Arg Ser Thr Glu His Asn Ser  
 1010 1015 1020  
 Ser Leu Met Val Ser Glu Ser Glu Phe Asp Ser Asp Gln Asp Thr Ile  
 1025 1030 1035 1040  
 Phe Ser Arg Glu Lys Met Glu Arg Gly Asn Pro Lys Val Ser Met Asn  
 1045 1050 1055  
 Gly Ser Ile Arg Asn Gly Ala Ser Phe Ser Tyr Cys Ser Lys Asp Arg  
 1060 1065 1070

<210> 9  
 <211> 1072  
 <212> PRT  
 <213> Homo sapiens

<400> 9  
 Met Ala Pro Pro Thr Gly Val Leu Ser Ser Leu Leu Leu Val Thr  
 1 5 10 15  
 Ile Ala Gly Cys Ala Arg Lys Gln Cys Ser Glu Gly Arg Thr Tyr Ser  
 20 25 30  
 Asn Ala Val Ile Ser Pro Asn Leu Glu Thr Thr Arg Ile Met Arg Val  
 35 40 45  
 Ser His Thr Phe Pro Val Val Asp Cys Thr Ala Ala Cys Cys Asp Leu  
 50 55 60  
 Ser Ser Cys Asp Leu Ala Trp Trp Phe Glu Gly Arg Cys Tyr Leu Val  
 65 70 75 80

Ser Cys Pro His Lys Glu Asn Cys Glu Pro Lys Lys Met Gly Pro Ile  
       85                 90                 95  
 Arg Ser Tyr Leu Thr Phe Val Leu Arg Pro Val Gln Arg Pro Ala Gln  
       100                105                110  
 Leu Leu Asp Tyr Gly Asp Met Met Leu Asn Arg Gly Ser Pro Ser Gly  
       115                120                125  
 Ile Trp Gly Asp Ser Pro Glu Asp Ile Arg Lys Asp Leu Pro Phe Leu  
       130                135                140  
 Gly Lys Asp Trp Gly Leu Glu Glu Met Ser Glu Tyr Ala Asp Asp Tyr  
       145                150                155                160  
 Arg Glu Leu Glu Lys Asp Leu Leu Gln Pro Ser Gly Lys Gln Glu Pro  
       165                170                175  
 Arg Gly Ser Ala Glu Tyr Thr Asp Trp Gly Leu Leu Pro Gly Ser Glu  
       180                185                190  
 Gly Ala Phe Asn Ser Ser Val Gly Asp Ser Pro Ala Val Pro Ala Glu  
       195                200                205  
 Thr Gln Gln Asp Pro Glu Leu His Tyr Leu Asn Glu Ser Ala Ser Thr  
       210                215                220  
 Pro Ala Pro Lys Leu Pro Glu Arg Ser Val Leu Leu Pro Leu Pro Thr  
       225                230                235                240  
 Thr Pro Ser Ser Gly Glu Val Leu Glu Lys Glu Lys Ala Ser Gln Leu  
       245                250                255  
 Gln Glu Gln Ser Ser Asn Ser Ser Gly Lys Glu Val Leu Met Pro Ser  
       260                265                270  
 His Ser Leu Pro Pro Ala Ser Leu Glu Leu Ser Ser Val Thr Val Glu  
       275                280                285  
 Lys Ser Pro Val Leu Thr Val Thr Pro Gly Ser Thr Glu His Ser Ile  
       290                295                300  
 Pro Thr Pro Pro Thr Ser Ala Ala Pro Ser Glu Ser Thr Pro Ser Glu  
       305                310                315                320  
 Leu Pro Ile Ser Pro Thr Thr Ala Pro Arg Thr Val Lys Glu Leu Thr  
       325                330                335  
 Val Ser Ala Gly Asp Asn Leu Ile Ile Thr Leu Pro Asp Asn Glu Val  
       340                345                350  
 Glu Leu Lys Ala Phe Val Ala Pro Ala Pro Pro Val Glu Thr Thr Tyr  
       355                360                365  
 Asn Tyr Glu Trp Asn Leu Ile Ser His Pro Thr Asp Tyr Gln Gly Glu  
       370                375                380  
 Ile Lys Gln Gly His Lys Gln Thr Leu Asn Leu Ser Gln Leu Ser Val  
       385                390                395                400  
 Gly Leu Tyr Val Phe Lys Val Thr Val Ser Ser Glu Asn Ala Phe Gly  
       405                410                415  
 Glu Gly Phe Val Asn Val Thr Val Lys Pro Ala Arg Arg Val Asn Leu  
       420                425                430  
 Pro Pro Val Ala Val Val Ser Pro Gln Leu Gln Glu Leu Thr Leu Pro  
       435                440                445  
 Leu Thr Ser Ala Leu Ile Asp Gly Ser Gln Ser Thr Asp Asp Thr Glu  
       450                455                460  
 Ile Val Ser Tyr His Trp Glu Glu Ile Asn Gly Pro Phe Ile Glu Glu  
       465                470                475                480  
 Lys Thr Ser Val Asp Ser Pro Val Leu Arg Leu Ser Asn Leu Asp Pro  
       485                490                495  
 Gly Asn Tyr Ser Phe Arg Leu Thr Val Thr Asp Ser Asp Gly Ala Thr  
       500                505                510  
 Asn Ser Thr Thr Ala Ala Leu Ile Val Asn Asn Ala Val Asp Tyr Pro  
       515                520                525  
 Pro Val Ala Asn Ala Gly Pro Asn His Thr Ile Thr Leu Pro Gln Asn  
       530                535                540  
 Ser Ile Thr Leu Asn Gly Asn Gln Ser Ser Asp Asp His Gln Ile Val  
       545                550                555                560  
 Leu Tyr Glu Trp Ser Leu Gly Pro Gly Ser Glu Gly Lys His Val Val  
       565                570                575  
 Met Gln Gly Val Gln Thr Pro Tyr Leu His Leu Ser Ala Met Gln Glu  
       580                585                590

Gly Asp Tyr Thr Phe Gln Leu Lys Val Thr Asp Ser Ser Arg Gln Gln  
       595                  600                  605  
 Ser Thr Ala Val Val Thr Val Ile Val Gln Pro Glu Asn Asn Arg Pro  
       610                  615                  620  
 Pro Val Ala Val Ala Gly Pro Asp Lys Glu Leu Ile Phe Pro Val Glu  
       625                  630                  635                  640  
 Ser Ala Thr Leu Asp Gly Ser Ser Ser Asp Asp His Gly Ile Val  
       645                  650                  655  
 Phe Tyr His Trp Glu His Val Arg Gly Pro Ser Ala Val Glu Met Glu  
       660                  665                  670  
 Asn Ile Asp Lys Ala Ile Ala Thr Val Thr Gly Leu Gln Val Gly Thr  
       675                  680                  685  
 Tyr His Phe Arg Leu Thr Val Lys Asp Gln Gln Gly Leu Ser Ser Thr  
       690                  695                  700  
 Ser Thr Leu Thr Val Ala Val Lys Lys Glu Asn Asn Ser Pro Pro Arg  
       705                  710                  715                  720  
 Ala Arg Ala Gly Gly Arg His Val Leu Val Leu Pro Asn Asn Ser Ile  
       725                  730                  735  
 Thr Leu Asp Gly Ser Arg Ser Thr Asp Asp Gln Arg Ile Val Ser Tyr  
       740                  745                  750  
 Leu Trp Ile Arg Asp Gly Gln Ser Pro Ala Ala Gly Asp Val Ile Asp  
       755                  760                  765  
 Gly Ser Asp His Ser Val Ala Leu Gln Leu Thr Asn Leu Val Glu Gly  
       770                  775                  780  
 Val Tyr Thr Phe His Leu Arg Val Thr Asp Ser Gln Gly Ala Ser Asp  
       785                  790                  795                  800  
 Thr Asp Thr Ala Thr Val Glu Val Gln Pro Asp Pro Arg Lys Ser Gly  
       805                  810                  815  
 Leu Val Glu Leu Thr Leu Gln Val Gly Val Gly Gln Leu Thr Glu Gln  
       820                  825                  830  
 Arg Lys Asp Thr Leu Val Arg Gln Leu Ala Val Leu Leu Asn Val Leu  
       835                  840                  845  
 Asp Ser Asp Ile Lys Val Gln Lys Ile Arg Ala His Ser Asp Leu Ser  
       850                  855                  860  
 Thr Val Ile Val Phe Tyr Val Gln Ser Arg Pro Pro Phe Lys Val Leu  
       865                  870                  875                  880  
 Lys Ala Ala Glu Val Ala Arg Asn Leu His Met Arg Leu Ser Lys Glu  
       885                  890                  895  
 Lys Ala Asp Phe Leu Leu Phe Lys Val Leu Arg Val Asp Thr Ala Gly  
       900                  905                  910  
 Cys Leu Leu Lys Cys Ser Gly His Gly His Cys Asp Pro Leu Thr Lys  
       915                  920                  925  
 Arg Cys Ile Cys Ser His Leu Trp Met Glu Asn Leu Ile Gln Arg Tyr  
       930                  935                  940  
 Ile Trp Asp Gly Glu Ser Asn Cys Glu Trp Ser Ile Phe Tyr Val Thr  
       945                  950                  955                  960  
 Val Leu Ala Phe Thr Leu Ile Val Leu Thr Gly Gly Phe Thr Trp Leu  
       965                  970                  975  
 Cys Ile Cys Cys Lys Arg Gln Lys Arg Thr Lys Ile Arg Lys Lys  
       980                  985                  990  
 Thr Lys Tyr Thr Ile Leu Asp Asn Met Asp Glu Gln Glu Arg Met Glu  
       995                  1000                1005  
 Leu Arg Pro Lys Tyr Gly Ile Lys His Arg Ser Thr Glu His Asn Ser  
       1010                1015                1020  
 Ser Leu Met Val Ser Glu Ser Glu Phe Asp Ser Asp Gln Asp Thr Ile  
       1025                1030                1035                1040  
 Phe Ser Arg Glu Lys Met Glu Arg Gly Asn Pro Lys Val Ser Met Asn  
       1045                1050                1055  
 Gly Ser Ile Arg Asn Gly Ala Ser Phe Ser Tyr Cys Ser Lys Asp Arg  
       1060                1065                1070

<210> 10  
 <211> 1063

<212> PRT  
<213> Homo sapiens

<400> 10  
Met Thr Arg Leu Gly Trp Pro Ser Pro Cys Cys Ala Arg Lys Gln Cys  
1 5 10 15  
Ser Glu Gly Arg Thr Tyr Ser Asn Ala Val Ile Ser Pro Asn Leu Glu  
20 25 30  
Thr Thr Arg Ile Met Arg Val Ser His Thr Phe Pro Val Val Asp Cys  
35 40 45  
Thr Ala Ala Cys Cys Asp Leu Ser Ser Cys Asp Leu Ala Trp Trp Phe  
50 55 60  
Glu Gly Arg Cys Tyr Leu Val Ser Cys Pro His Lys Glu Asn Cys Glu  
65 70 75 80  
Pro Lys Lys Met Gly Pro Ile Arg Ser Tyr Leu Thr Phe Val Leu Arg  
85 90 95  
Pro Val Gln Arg Pro Ala Gln Leu Leu Asp Tyr Gly Asp Met Met Leu  
100 105 110  
Asn Arg Gly Ser Pro Ser Gly Ile Trp Gly Asp Ser Pro Glu Asp Ile  
115 120 125  
Arg Lys Asp Leu Pro Phe Leu Gly Lys Asp Trp Gly Leu Glu Glu Met  
130 135 140  
Ser Glu Tyr Ser Asp Asp Tyr Arg Glu Leu Glu Lys Asp Leu Leu Gln  
145 150 155 160  
Pro Ser Gly Lys Gln Glu Pro Arg Gly Ser Ala Glu Tyr Thr Asp Trp  
165 170 175  
Gly Leu Leu Pro Gly Ser Glu Gly Ala Phe Asn Ser Ser Val Gly Asp  
180 185 190  
Ser Pro Ala Val Pro Ala Glu Thr Gln Gln Asp Pro Glu Leu His Tyr  
195 200 205  
Leu Asn Glu Ser Ala Ser Thr Pro Ala Pro Lys Leu Pro Glu Arg Ser  
210 215 220  
Val Leu Leu Pro Leu Pro Thr Thr Pro Ser Ser Gly Glu Val Leu Glu  
225 230 235 240  
Lys Glu Lys Ala Ser Gln Leu Gln Glu Gln Ser Ser Asn Ser Ser Gly  
245 250 255  
Lys Glu Val Leu Met Pro Ser His Ser Leu Pro Pro Ala Ser Leu Glu  
260 265 270  
Leu Ser Ser Val Thr Val Glu Lys Ser Pro Val Leu Thr Val Thr Pro  
275 280 285  
Gly Ser Thr Glu His Ser Ile Pro Thr Pro Pro Thr Ser Ala Ala Pro  
290 295 300  
Ser Glu Ser Thr Pro Ser Glu Leu Pro Ile Ser Pro Thr Thr Ala Pro  
305 310 315 320  
Arg Thr Val Lys Glu Leu Thr Val Ser Ala Gly Asp Asn Leu Ile Ile  
325 330 335  
Thr Leu Pro Asp Asn Glu Val Glu Leu Lys Ala Phe Val Ala Pro Ala  
340 345 350  
Pro Pro Val Glu Thr Thr Tyr Asn Tyr Glu Trp Asn Leu Ile Ser His  
355 360 365  
Pro Thr Asp Tyr Gln Gly Glu Ile Lys Gln Gly His Lys Gln Thr Leu  
370 375 380  
Asn Leu Ser Gln Leu Ser Val Gly Leu Tyr Val Phe Lys Val Thr Val  
385 390 395 400  
Ser Ser Glu Asn Ala Phe Gly Glu Gly Phe Val Asn Val Thr Val Lys  
405 410 415  
Pro Ala Arg Arg Val Asn Leu Pro Pro Val Ala Val Val Ser Pro Gln  
420 425 430  
Leu Gln Glu Leu Thr Leu Pro Leu Thr Ser Ala Leu Ile Asp Gly Ser  
435 440 445  
Gln Ser Thr Asp Asp Thr Glu Ile Val Ser Tyr His Trp Glu Glu Ile  
450 455 460  
Asn Gly Pro Phe Ile Glu Glu Lys Thr Ser Val Asp Ser Pro Val Leu  
465 470 475 480

Arg Leu Ser Asn Leu Asp Pro Gly Asn Tyr Ser Phe Arg Leu Thr Val  
                   485                  490                  495  
 Thr Asp Ser Asp Gly Ala Thr Asn Ser Thr Thr Ala Ala Leu Ile Val  
                   500                  505                  510  
 Asn Asn Ala Val Asp Tyr Pro Pro Val Ala Asn Ala Gly Pro Asn His  
                   515                  520                  525  
 Thr Ile Thr Leu Pro Gln Asn Ser Ile Thr Leu Asn Gly Asn Gln Ser  
                   530                  535                  540  
 Ser Asp Asp His Gln Ile Val Leu Tyr Glu Trp Ser Leu Gly Pro Gly  
                   545                  550                  555                  560  
 Ser Glu Gly Lys His Val Val Met Gln Gly Val Gln Thr Pro Tyr Leu  
                   565                  570                  575  
 His Leu Ser Ala Met Gln Glu Gly Asp Tyr Thr Phe Gln Leu Lys Val  
                   580                  585                  590  
 Thr Asp Ser Ser Arg Gln Gln Ser Thr Ala Val Val Thr Val Ile Val  
                   595                  600                  605  
 Gln Pro Glu Asn Asn Arg Pro Pro Val Ala Val Ala Gly Pro Asp Lys  
                   610                  615                  620  
 Glu Leu Ile Phe Pro Val Glu Ser Ala Thr Leu Asp Gly Ser Ser Ser  
                   625                  630                  635                  640  
 Ser Asp Asp His Gly Ile Val Phe Tyr His Trp Glu His Val Arg Gly  
                   645                  650                  655  
 Pro Ser Ala Val Glu Met Glu Asn Ile Asp Lys Ala Ile Ala Thr Val  
                   660                  665                  670  
 Thr Gly Leu Gln Val Gly Thr Tyr His Phe Arg Leu Thr Val Lys Asp  
                   675                  680                  685  
 Gln Gln Gly Leu Ser Ser Thr Ser Thr Leu Thr Val Ala Val Lys Lys  
                   690                  695                  700  
 Glu Asn Asn Ser Pro Pro Arg Ala Arg Ala Gly Gly Arg His Val Leu  
                   705                  710                  715                  720  
 Val Leu Pro Asn Asn Ser Ile Thr Leu Asp Gly Ser Arg Ser Thr Asp  
                   725                  730                  735  
 Asp Gln Arg Ile Val Ser Tyr Leu Trp Ile Arg Asp Gly Gln Ser Pro  
                   740                  745                  750  
 Ala Ala Gly Asp Val Ile Asp Gly Ser Asp His Ser Val Ala Leu Gln  
                   755                  760                  765  
 Leu Thr Asn Leu Val Glu Gly Val Tyr Thr Phe His Leu Arg Val Thr  
                   770                  775                  780  
 Asp Ser Gln Gly Ala Ser Asp Thr Asp Thr Ala Thr Val Glu Val Gln  
                   785                  790                  795                  800  
 Pro Asp Pro Arg Lys Ser Gly Leu Val Glu Leu Thr Leu Gln Val Gly  
                   805                  810                  815  
 Val Gly Gln Leu Thr Glu Gln Arg Lys Asp Thr Leu Val Arg Gln Leu  
                   820                  825                  830  
 Ala Val Leu Leu Asn Val Leu Asp Ser Asp Ile Lys Val Gln Lys Ile  
                   835                  840                  845  
 Arg Ala His Ser Asp Leu Ser Thr Val Ile Val Phe Tyr Val Gln Ser  
                   850                  855                  860  
 Arg Pro Pro Phe Lys Val Leu Lys Ala Ala Glu Val Ala Arg Asn Leu  
                   865                  870                  875                  880  
 His Met Arg Leu Ser Lys Glu Lys Ala Asp Phe Leu Leu Phe Lys Val  
                   885                  890                  895  
 Leu Arg Val Asp Thr Ala Gly Cys Leu Leu Lys Cys Ser Gly His Gly  
                   900                  905                  910  
 His Cys Asp Pro Leu Thr Lys Arg Cys Ile Cys Ser His Leu Trp Met  
                   915                  920                  925  
 Glu Asn Leu Ile Gln Arg Tyr Ile Trp Asp Gly Glu Ser Asn Cys Glu  
                   930                  935                  940  
 Trp Ser Ile Phe Tyr Val Thr Val Leu Ala Phe Thr Leu Ile Val Leu  
                   945                  950                  955                  960  
 Thr Gly Gly Phe Thr Trp Leu Cys Ile Cys Cys Cys Lys Arg Gln Lys  
                   965                  970                  975  
 Arg Thr Lys Ile Arg Lys Lys Thr Lys Tyr Thr Ile Leu Asp Asn Met  
                   980                  985                  990

Asp Glu Gln Glu Arg Met Glu Leu Arg Pro Lys Tyr Gly Ile Lys His  
 995 1000 1005  
 Arg Ser Thr Glu His Asn Ser Ser Leu Met Val Ser Glu Ser Glu Phe  
 1010 1015 1020  
 Asp Ser Asp Gln Asp Thr Ile Phe Ser Arg Glu Lys Met Glu Arg Gly  
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 Ser Tyr Cys Ser Lys Asp Arg  
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<210> 11  
 <211> 1072  
 <212> PRT  
 <213> Homo sapiens

<400> 11  
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 35 40 45  
 Ser His Thr Phe Pro Val Val Asp Cys Thr Ala Ala Cys Cys Asp Leu  
 50 55 60  
 Ser Ser Cys Asp Leu Ala Trp Trp Phe Glu Gly Arg Cys Tyr Leu Val  
 65 70 75 80  
 Ser Cys Pro His Lys Glu Asn Cys Glu Pro Lys Lys Met Gly Pro Ile  
 85 90 95  
 Arg Ser Tyr Leu Thr Phe Val Leu Arg Pro Val Gln Arg Pro Ala Gln  
 100 105 110  
 Leu Leu Asp Tyr Gly Asp Met Met Leu Asn Arg Gly Ser Pro Ser Gly  
 115 120 125  
 Ile Trp Gly Asp Ser Pro Glu Asp Ile Arg Lys Asp Leu Thr Phe Leu  
 130 135 140  
 Gly Lys Asp Trp Gly Leu Glu Glu Met Ser Glu Tyr Ser Asp Asp Tyr  
 145 150 155 160  
 Arg Glu Leu Glu Lys Asp Leu Leu Gln Pro Ser Gly Lys Gln Glu Pro  
 165 170 175  
 Arg Gly Ser Ala Glu Tyr Thr Asp Trp Gly Leu Leu Pro Gly Ser Glu  
 180 185 190  
 Gly Ala Phe Asn Ser Ser Val Gly Asp Ser Pro Ala Val Pro Ala Glu  
 195 200 205  
 Thr Gln Gln Asp Pro Glu Leu His Tyr Leu Asn Glu Ser Ala Ser Thr  
 210 215 220  
 Pro Ala Pro Lys Leu Pro Glu Arg Ser Val Leu Leu Pro Leu Pro Thr  
 225 230 235 240  
 Thr Pro Ser Ser Gly Glu Val Leu Glu Lys Glu Lys Ala Ser Gln Leu  
 245 250 255  
 Gln Glu Gln Ser Ser Asn Ser Ser Gly Lys Glu Val Leu Met Pro Ser  
 260 265 270  
 His Ser Leu Pro Pro Ala Ser Leu Glu Leu Ser Ser Val Thr Val Glu  
 275 280 285  
 Lys Ser Pro Val Leu Thr Val Thr Pro Gly Ser Thr Glu His Ser Ile  
 290 295 300  
 Pro Thr Pro Pro Thr Ser Ala Ala Pro Ser Glu Ser Thr Pro Ser Glu  
 305 310 315 320  
 Leu Pro Ile Ser Pro Thr Thr Ala Pro Arg Thr Val Lys Glu Leu Thr  
 325 330 335  
 Val Ser Ala Gly Asp Asn Leu Ile Ile Thr Leu Pro Asp Asn Glu Val  
 340 345 350  
 Glu Leu Lys Ala Phe Val Ala Pro Ala Pro Pro Val Glu Thr Thr Tyr  
 355 360 365

Asn Tyr Glu Trp Asn Leu Ile Ser His Pro Thr Asp Tyr Gln Gly Glu  
   370               375               380  
 Ile Lys Gln Gly His Lys Gln Thr Leu Asn Leu Ser Gln Leu Ser Val  
   385               390               395               400  
 Gly Leu Tyr Val Phe Lys Val Thr Val Ser Ser Glu Asn Ala Phe Gly  
   405               410               415  
 Glu Gly Phe Val Asn Val Thr Val Lys Pro Ala Arg Arg Val Asn Leu  
   420               425               430  
 Pro Pro Val Ala Val Val Ser Pro Gln Leu Gln Glu Leu Thr Leu Pro  
   435               440               445  
 Leu Thr Ser Ala Leu Ile Asp Gly Ser Gln Ser Thr Asp Asp Thr Glu  
   450               455               460  
 Ile Val Ser Tyr His Trp Glu Glu Ile Asn Gly Pro Phe Ile Glu Glu  
   465               470               475               480  
 Lys Thr Ser Val Asp Ser Pro Val Leu Arg Leu Ser Asn Leu Asp Pro  
   485               490               495  
 Gly Asn Tyr Ser Phe Arg Leu Thr Val Thr Asp Ser Asp Gly Ala Thr  
   500               505               510  
 Asn Ser Thr Thr Ala Ala Leu Ile Val Asn Asn Ala Val Asp Tyr Pro  
   515               520               525  
 Pro Val Ala Asn Ala Gly Pro Asn His Thr Ile Thr Leu Pro Gln Asn  
   530               535               540  
 Ser Ile Thr Leu Asn Gly Asn Gln Ser Ser Asp Asp His Gln Ile Val  
   545               550               555               560  
 Leu Tyr Glu Trp Ser Leu Gly Pro Gly Ser Glu Gly Lys His Val Val  
   565               570               575  
 Met Gln Gly Val Gln Thr Pro Tyr Leu His Leu Ser Ala Met Gln Glu  
   580               585               590  
 Gly Asp Tyr Thr Phe Gln Leu Lys Val Thr Asp Ser Ser Arg Gln Gln  
   595               600               605  
 Ser Thr Ala Val Val Thr Val Ile Val Gln Pro Glu Asn Asn Arg Pro  
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 Pro Val Ala Val Ala Gly Pro Asp Lys Glu Leu Ile Phe Pro Val Glu  
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 Ser Ala Thr Leu Asp Gly Ser Ser Ser Asp Asp His Gly Ile Val  
   645               650               655  
 Phe Tyr His Trp Glu His Val Arg Gly Pro Ser Ala Val Glu Met Glu  
   660               665               670  
 Asn Ile Asp Lys Ala Ile Ala Thr Val Thr Gly Leu Gln Val Gly Thr  
   675               680               685  
 Tyr His Phe Arg Leu Thr Val Lys Asp Gln Gln Gly Leu Ser Ser Thr  
   690               695               700  
 Ser Thr Leu Thr Val Ala Val Lys Lys Glu Asn Asn Ser Pro Pro Arg  
   705               710               715               720  
 Ala Arg Ala Gly Gly Arg His Val Leu Val Leu Pro Asn Asn Ser Ile  
   725               730               735  
 Thr Leu Asp Gly Ser Arg Ser Thr Asp Asp Gln Arg Ile Val Ser Tyr  
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 Leu Trp Ile Arg Asp Gly Gln Ser Pro Ala Ala Gly Asp Val Ile Asp  
   755               760               765  
 Gly Ser Asp His Ser Val Ala Leu Gln Leu Thr Asn Leu Val Glu Gly  
   770               775               780  
 Val Tyr Thr Phe His Leu Arg Val Thr Asp Ser Gln Gly Ala Ser Asp  
   785               790               795               800  
 Thr Asp Thr Ala Thr Val Glu Val Gln Pro Asp Pro Arg Lys Ser Gly  
   805               810               815  
 Leu Val Glu Leu Thr Leu Gln Val Gly Val Gly Gln Leu Thr Glu Gln  
   820               825               830  
 Arg Lys Asp Thr Leu Val Arg Gln Leu Ala Val Leu Leu Asn Val Leu  
   835               840               845  
 Asp Ser Asp Ile Lys Val Gln Lys Ile Arg Ala His Ser Asp Leu Ser  
   850               855               860  
 Thr Val Ile Val Phe Tyr Val Gln Ser Arg Pro Pro Phe Lys Val Leu  
   865               870               880

Lys Ala Ala Glu Val Ala Arg Asn Leu His Met Arg Leu Ser Lys Glu  
       885                  890                  895  
 Lys Ala Asp Phe Leu Leu Phe Lys Val Leu Arg Val Asp Thr Ala Gly  
       900                  905                  910  
 Cys Leu Leu Lys Cys Ser Gly His Gly His Cys Asp Pro Leu Thr Lys  
       915                  920                  925  
 Arg Cys Ile Cys Ser His Leu Trp Met Glu Asn Leu Ile Gln Arg Tyr  
       930                  935                  940  
 Ile Trp Asp Gly Glu Ser Asn Cys Glu Trp Ser Ile Phe Tyr Val Thr  
       945                  950                  955                  960  
 Val Leu Ala Phe Thr Leu Ile Val Leu Thr Gly Gly Phe Thr Trp Leu  
       965                  970                  975  
 Cys Ile Cys Cys Lys Arg Gln Lys Arg Thr Lys Ile Arg Lys Lys  
       980                  985                  990  
 Thr Lys Tyr Thr Ile Leu Asp Asn Met Asp Glu Gln Glu Arg Met Glu  
       995                  1000                1005  
 Leu Arg Pro Lys Tyr Gly Ile Lys His Arg Ser Thr Glu His Asn Ser  
       1010                1015                1020  
 Ser Leu Met Val Ser Glu Ser Glu Phe Asp Ser Asp Gln Asp Thr Ile  
       1025                1030                1035                1040  
 Phe Ser Arg Glu Lys Met Glu Arg Gly Asn Pro Lys Val Ser Met Asn  
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 Gly Ser Ile Arg Asn Gly Ala Ser Phe Ser Tyr Cys Ser Lys Asp Arg  
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<210> 12  
 <211> 1072  
 <212> PRT  
 <213> Homo sapiens

<400> 12

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20                          25	30		
Asn Ala Val Ile Ser Pro	Asn Leu Glu Thr	Thr Arg Ile	Met Arg Val
35                          40	45		
Ser His Thr Phe Pro Val	Val Asp Cys Thr	Ala Ala Cys Cys	Asp Leu
50                          55	60		
Ser Ser Cys Asp Leu Ala	Trp Trp Phe Glu	Gly Arg Cys Tyr	Leu Val
65                          70	75	80	
Ser Cys Pro His Lys Glu	Asn Cys Glu Pro	Lys Met Gly Pro	Ile
85                          90	95		
Arg Ser Tyr Leu Thr Phe	Val Leu Arg Pro	Val Gln Arg Pro	Ala Gln
100                        105	110		
Leu Leu Asp Tyr Gly Asp	Met Met Leu Asn	Arg Gly Ser Pro	Ser Gly
115                        120	125		
Ile Trp Gly Asp Ser Pro	Glu Asp Ile Arg	Lys Asp Leu Pro	Phe Leu
130                        135	140		
Gly Lys Asp Trp Gly Leu	Glu Met Ser Glu	Tyr Ala Asp Asp	Tyr
145                        150	155	160	
Arg Glu Leu Glu Lys Asp	Leu Leu Gln Pro	Ser Gly Lys Gln	Glu Pro
165                        170	175		
Arg Gly Ser Ala Glu Tyr	Thr Asp Trp Gly	Leu Leu Pro Gly	Ser Glu
180                        185	190		
Gly Ala Phe Asn Ser Ser	Val Gly Asp Ser	Pro Ala Val	Pro Ala Glu
195                        200	205		
Thr Gln Gln Asp Pro Glu	Leu His Tyr Leu	Asn Glu Ser Ala	Ser Thr
210                        215	220		
Pro Ala Pro Lys Leu Pro	Glu Arg Ser Val	Leu Leu Pro	Leu Pro Thr
225                        230	235	240	
Thr Pro Ser Ser Gly Glu	Val Leu Glu Lys	Glu Lys Ala Ser	Gln Leu
245                        250	255		

Gln Glu Gln Ser Ser Asn Ser Ser Gly Lys Glu Val Leu Met Pro Ser  
     260                         265                         270  
 His Ser Leu Pro Pro Ala Ser Leu Glu Leu Ser Ser Val Thr Val Glu  
     275                         280                         285  
 Lys Ser Pro Val Leu Thr Val Thr Pro Gly Ser Thr Glu His Ser Ile  
     290                         295                         300  
 Pro Thr Pro Pro Thr Ser Ala Ala Pro Ser Glu Ser Thr Pro Ser Glu  
     305                         310                         315                         320  
 Leu Pro Ile Ser Pro Thr Thr Ala Pro Arg Thr Val Lys Glu Leu Thr  
     325                         330                         335  
 Val Ser Ala Gly Asp Asn Leu Ile Ile Thr Leu Pro Asp Asn Glu Val  
     340                         345                         350  
 Glu Leu Lys Ala Phe Val Ala Pro Ala Pro Pro Val Glu Thr Thr Tyr  
     355                         360                         365  
 Asn Tyr Glu Trp Asn Leu Ile Ser His Pro Thr Asp Tyr Gln Gly Glu  
     370                         375                         380  
 Ile Lys Gln Gly His Lys Gln Thr Leu Asn Leu Ser Gln Leu Ser Val  
     385                         390                         395                         400  
 Gly Leu Tyr Val Phe Lys Val Thr Val Ser Ser Glu Asn Ala Phe Gly  
     405                         410                         415  
 Glu Gly Phe Val Asn Val Thr Val Lys Pro Ala Arg Arg Val Asn Leu  
     420                         425                         430  
 Pro Pro Val Ala Val Val Ser Pro Gln Leu Gln Glu Leu Thr Leu Pro  
     435                         440                         445  
 Leu Thr Ser Ala Leu Ile Asp Gly Ser Gln Ser Thr Asp Asp Thr Glu  
     450                         455                         460  
 Ile Val Ser Tyr His Trp Glu Glu Ile Asn Gly Pro Phe Ile Glu Glu  
     465                         470                         475                         480  
 Lys Thr Ser Val Asp Ser Pro Val Leu Arg Leu Ser Asn Leu Asp Pro  
     485                         490                         495  
 Gly Asn Tyr Ser Phe Arg Leu Thr Val Thr Asp Ser Asp Gly Ala Thr  
     500                         505                         510  
 Asn Ser Thr Thr Ala Ala Leu Ile Val Asn Asn Ala Val Asp Tyr Pro  
     515                         520                         525  
 Pro Val Ala Asn Ala Gly Pro Asn His Thr Ile Thr Leu Pro Gln Asn  
     530                         535                         540  
 Ser Ile Thr Leu Asn Gly Asn Gln Ser Ser Asp Asp His Gln Ile Val  
     545                         550                         555                         560  
 Leu Tyr Glu Trp Ser Leu Gly Pro Gly Ser Glu Gly Lys His Val Val  
     565                         570                         575  
 Met Gln Gly Val Gln Thr Pro Tyr Leu His Leu Ser Ala Met Gln Glu  
     580                         585                         590  
 Gly Asp Tyr Thr Phe Gln Leu Lys Val Thr Asp Ser Ser Arg Gln Gln  
     595                         600                         605  
 Ser Thr Ala Val Val Thr Val Ile Val Gln Pro Glu Asn Asn Arg Pro  
     610                         615                         620  
 Pro Val Ala Val Ala Gly Pro Asp Lys Glu Leu Ile Phe Pro Val Glu  
     625                         630                         635                         640  
 Ser Ala Thr Leu Asp Gly Ser Ser Ser Ser Asp Asp His Gly Ile Val  
     645                         650                         655  
 Phe Tyr His Trp Glu His Val Arg Gly Pro Ser Ala Val Glu Met Glu  
     660                         665                         670  
 Asn Ile Asp Lys Ala Ile Ala Thr Val Thr Gly Leu Gln Val Gly Thr  
     675                         680                         685  
 Tyr His Phe Arg Leu Thr Val Lys Asp Gln Gln Gly Leu Ser Ser Thr  
     690                         695                         700  
 Ser Thr Leu Thr Val Ala Val Lys Lys Glu Asn Asn Ser Pro Pro Arg  
     705                         710                         715                         720  
 Ala Arg Ala Gly Gly Arg His Val Leu Val Leu Pro Asn Asn Ser Ile  
     725                         730                         735  
 Thr Leu Asp Gly Ser Arg Ser Thr Asp Asp Gln Arg Ile Val Ser Tyr  
     740                         745                         750  
 Leu Trp Ile Arg Asp Gly Gln Ser Pro Ala Ala Gly Asp Val Ile Asp  
     755                         760                         765

Gly	Ser	Asp	His	Ser	Val	Ala	Leu	Gln	Leu	Thr	Asn	Leu	Val	Glu	Gly
770					775					780					
Val	Tyr	Thr	Phe	His	Leu	Arg	Val	Thr	Asp	Ser	Gln	Gly	Ala	Ser	Asp
785					790				795						800
Thr	Asp	Thr	Ala	Thr	Val	Glu	Val	Gln	Pro	Asp	Pro	Arg	Lys	Ser	Gly
					805				810				815		
Leu	Val	Glu	Leu	Thr	Leu	Gln	Val	Gly	Val	Gly	Gln	Leu	Thr	Glu	Gln
					820			825				830			
Arg	Lys	Asp	Thr	Leu	Val	Arg	Gln	Leu	Ala	Val	Leu	Leu	Asn	Val	Leu
					835			840			845				
Asp	Ser	Asp	Ile	Lys	Val	Gln	Lys	Ile	Arg	Ala	His	Ser	Asp	Leu	Ser
					850			855			860				
Thr	Val	Ile	Val	Phe	Tyr	Val	Gln	Ser	Arg	Pro	Pro	Phe	Lys	Val	Leu
					865			870		875				880	
Lys	Ala	Ala	Glu	Val	Ala	Arg	Asn	Leu	His	Met	Arg	Leu	Ser	Lys	Glu
					885			890				895			
Lys	Ala	Asp	Phe	Leu	Leu	Phe	Lys	Val	Leu	Arg	Val	Asp	Thr	Ala	Gly
					900			905			910				
Cys	Leu	Leu	Lys	Cys	Ser	Gly	His	Gly	His	Cys	Asp	Pro	Leu	Thr	Lys
					915			920			925				
Arg	Cys	Ile	Cys	Ser	His	Leu	Trp	Met	Glu	Asn	Leu	Ile	Gln	Arg	Tyr
					930			935			940				
Ile	Trp	Asp	Gly	Glu	Ser	Asn	Cys	Glu	Trp	Ser	Ile	Phe	Tyr	Val	Thr
					945			950		955			960		
Val	Leu	Ala	Phe	Thr	Leu	Ile	Val	Leu	Thr	Gly	Gly	Phe	Thr	Trp	Leu
					965			970				975			
Cys	Ile	Cys	Cys	Cys	Lys	Arg	Gln	Lys	Arg	Thr	Lys	Ile	Arg	Lys	Lys
					980			985			990				
Thr	Lys	Tyr	Thr	Ile	Leu	Asp	Asn	Met	Asp	Glu	Gln	Glu	Arg	Met	Glu
					995			1000			1005				
Leu	Arg	Pro	Lys	Tyr	Gly	Ile	Lys	His	Arg	Ser	Thr	Glu	His	Asn	Ser
					1010			1015			1020				
Ser	Leu	Met	Val	Ser	Glu	Ser	Glu	Phe	Asp	Ser	Asp	Gln	Asp	Thr	Ile
					1025			1030			1035			1040	
Phe	Ser	Arg	Glu	Lys	Met	Glu	Arg	Gly	Asn	Pro	Lys	Val	Ser	Met	Asn
					1045			1050			1055				
Gly	Ser	Ile	Arg	Asn	Gly	Ala	Ser	Phe	Ser	Tyr	Cys	Ser	Lys	Asp	Arg
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<210> 13

<211> 14

<212> PRT

<213> tetanus toxoid

<400> 13

Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu  
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<210> 14

<211> 21

<212> PRT

<213> Plasmodium falciparum

<400> 14

Asp Ile Glu Lys Lys Ile Ala Lys Met Glu Lys Ala Ser Ser Val Phe

1 5 10 15

Asn Val Val Asn Ser

20

<210> 15

<211> 16

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<212> PRT
<213> Streptococcus

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<210> 16
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> pan-DR-binding epitope

<221> VARIANT
<222> 1, 13
<223> Xaa = D-alanine or L-alanine

<221> VARIANT
<222> 3
<223> Xaa = cyclohexylalanine, phenylalanine, or
tyrosine

<400> 16
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 1           5           10

<210> 17
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> cDNA synthesis primer

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<220>
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<400> 18
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<210> 20

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<400> 25
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<210> 26  
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<210> 27  
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<212> DNA  
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<220>  
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<400> 27  
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<210> 28  
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<213> Homo sapiens

<400> 28  
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<210> 29  
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Ser Val Gly Leu Tyr Val Phe Lys Val  
1 5

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Glu Ile Val Ser Tyr His Trp Glu Glu  
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<213> Homo sapiens

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Asp Pro Gly Asn Tyr Ser Phe Arg Leu  
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<210> 245

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Asn Ala Val Asp Tyr Pro Pro Val Ala  
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Gln Ile Val Leu Tyr Glu Trp Ser Leu  
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Val Gln Thr Pro Tyr Leu His Leu Ser  
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<400> 249

Gly Ile Val Phe Tyr His Trp Glu His

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Arg Ile Val Ser Tyr Leu Trp Ile Arg  
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1 5

<210> 254  
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 35 40 45  
 Ser His Thr Phe Pro Val Val Asp Cys Thr Ala Ala Cys Cys Asp Leu  
 50 55 60  
 Ser Ser Cys Asp Leu Ala Trp Trp Phe Glu Gly Arg Cys Tyr Leu Val  
 65 70 75 80  
 Ser Cys Pro His Lys Glu Asn Cys Glu Pro Lys Lys Met Gly Pro Ile  
 85 90 95  
 Arg Ser Tyr Leu Thr Phe Val Leu Arg Pro Val Gln Arg Pro Ala Gln  
 100 105 110  
 Leu Leu Asp Tyr Gly Asp Met Met Leu Asn Arg Gly Ser Pro Ser Gly  
 115 120 125  
 Ile Trp Gly Asp Ser Pro Glu Asp Ile Arg Lys Asp Leu Pro Phe Leu  
 130 135 140  
 Gly Lys Asp Trp Gly Leu Glu Met Ser Glu Tyr Ser Asp Asp Tyr  
 145 150 155 160  
 Arg Glu Leu Glu Lys Asp Leu Leu Gln Pro Ser Gly Lys Gln Glu Pro  
 165 170 175  
 Arg Gly Ser Ala Glu Tyr Thr Asp Trp Gly Leu Leu Pro Gly Ser Glu  
 180 185 190  
 Gly Ala Phe Asn Ser Ser Val Gly Asp Ser Pro Ala Val Pro Ala Glu  
 195 200 205  
 Thr Gln Gln Asp Pro Glu Leu His Tyr Leu Asn Glu Ser Ala Ser Thr  
 210 215 220  
 Pro Ala Pro Lys Leu Pro Glu Arg Ser Val Leu Leu Pro Leu Pro Thr

225	230	235	240
Thr Pro Ser Ser Gly Glu Val Leu Glu Lys	Glu Lys Ala Ser Gln Leu		
245	250	255	
Gln Glu Gln Ser Ser Asn Ser Ser Gly Lys	Glu Val Leu Met Pro Ser		
260	265	270	
His Ser Leu Pro Pro Ala Ser Leu Glu Leu Ser Ser Val	Val Thr Val Glu		
275	280	285	
Lys Ser Pro Val Leu Thr Val Thr Pro Gly Ser	Thr Glu His Ser Ile		
290	295	300	
Pro Thr Pro Pro Thr Ser Ala Ala Pro Ser Glu	Ser Thr Pro Ser Glu		
305	310	315	320
Leu Pro Ile Ser Pro Thr Thr Ala Pro Arg	Thr Val Lys Glu Leu Thr		
325	330	335	
Val Ser Ala Gly Asp Asn Leu Ile Ile Thr Leu Pro Asp Asn Glu Val			
340	345	350	
Glu Leu Lys Ala Phe Val Ala Pro Ala Pro Pro Val	Glu Thr Thr Tyr		
355	360	365	
Asn Tyr Glu Trp Asn Leu Ile Ser His Pro Thr Asp Tyr	Gln Gly Glu		
370	375	380	
Ile Lys Gln Gly His Lys Gln Thr Leu Asn Leu Ser Gln Leu Ser Val			
385	390	395	400
Gly Leu Tyr Val Phe Lys Val Thr Val Ser Ser Glu Asn Ala Phe Gly			
405	410	415	
Glu Gly Phe Val Asn Val Thr Val Lys Pro Ala Arg Arg Val Asn Leu			
420	425	430	
Pro Pro Val Ala Val Val Ser Pro Gln Leu Gln Glu Leu Thr Leu Pro			
435	440	445	
Leu Thr Ser Ala Leu Ile Asp Gly Ser Gln Ser Thr Asp Asp Thr Glu			
450	455	460	
Ile Val Ser Tyr His Trp Glu Glu Ile Asn Gly Pro Phe Ile Glu Glu			
465	470	475	480
Lys Thr Ser Val Asp Ser Pro Val Leu Arg Leu Ser Asn Leu Asp Pro			
485	490	495	
Gly Asn Tyr Ser Phe Arg Leu Thr Val Thr Asp Ser Asp Gly Ala Thr			
500	505	510	
Asn Ser Thr Thr Ala Ala Leu Ile Val Asn Asn Ala Val Asp Tyr Pro			
515	520	525	
Pro Val Ala Asn Ala Gly Pro Asn His Thr Ile Thr Leu Pro Gln Asn			
530	535	540	
Ser Ile Thr Leu Asn Gly Asn Gln Ser Ser Asp Asp His Gln Ile Val			
545	550	555	560
Leu Tyr Glu Trp Ser Leu Gly Pro Gly Ser Glu Gly Lys His Val Val			
565	570	575	
Met Gln Gly Val Gln Thr Pro Tyr Leu His Leu Ser Ala Met Gln Glu			
580	585	590	
Gly Asp Tyr Thr Phe Gln Leu Lys Val Thr Asp Ser Ser Arg Gln Gln			
595	600	605	
Ser Thr Ala Val Val Thr Val Ile Val Gln Pro Glu Asn Asn Arg Pro			
610	615	620	
Pro Val Ala Val Ala Gly Pro Asp Lys Glu Leu Ile Phe Pro Val Glu			
625	630	635	640
Ser Ala Thr Leu Asp Gly Ser Ser Ser Asp Asp His Gly Ile Val			
645	650	655	
Phe Tyr His Trp Glu His Val Arg Gly Pro Ser Ala Val Glu Met Glu			
660	665	670	
Asn Ile Asp Lys Ala Ile Ala Thr Val Thr Gly Leu Gln Val Gly Thr			
675	680	685	
Tyr His Phe Arg Leu Thr Val Lys Asp Gln Gln Gly Leu Ser Ser Thr			
690	695	700	
Ser Thr Leu Thr Val Ala Val Lys Lys Glu Asn Asn Ser Pro Pro Arg			
705	710	715	720
Ala Arg Ala Gly Gly Arg His Val Leu Val Leu Pro Asn Asn Ser Ile			
725	730	735	
Thr Leu Asp Gly Ser Arg Ser Thr Asp Asp Gln Arg Ile Val Ser Tyr			

	740	745	750
Leu Trp Ile Arg Asp Gly Gln Ser Pro Ala Ala Gly Asp Val Ile Asp			
755	760	765	
Gly Ser Asp His Ser Val Ala Leu Gln Leu Thr Asn Leu Val Glu Gly			
770	775	780	
Val Tyr Thr Phe His Leu Arg Val Thr Asp Ser Gln Gly Ala Ser Asp			
785	790	795	800
Thr Asp Thr Ala Thr Val Glu Val Gln Pro Asp Pro Arg Lys Ser Gly			
805	810	815	
Leu Val Glu Leu Thr Leu Gln Val Gly Val Gly Gln Leu Thr Glu Gln			
820	825	830	
Arg Lys Asp Thr Leu Val Arg Gln Leu Ala Val Leu Leu Asn Val Leu			
835	840	845	
Asp Ser Asp Ile Lys Val Gln Lys Ile Arg Ala His Ser Asp Leu Ser			
850	855	860	
Thr Val Ile Val Phe Tyr Val Gln Ser Arg Pro Pro Phe Lys Val Leu			
865	870	875	880
Lys Ala Ala Glu Val Ala Arg Asn Leu His Met Arg Leu Ser Lys Glu			
885	890	895	
Lys Ala Asp Phe Leu Leu Phe Lys Val Leu Arg Val Asp Thr Ala Gly			
900	905	910	
Cys Leu Leu Lys Cys Ser Gly His Gly His Cys Asp Pro Leu Thr Lys			
915	920	925	
Arg Cys Ile Cys Ser His Leu Trp Met Glu Asn Leu Ile Gln Arg Tyr			
930	935	940	
Ile Trp Asp Gly Glu Ser Asn Cys Glu Trp Ser Ile Phe Tyr Val Thr			
945	950	955	960
Val Leu Ala Phe Thr Leu Ile Val Leu Thr Gly Gly Phe Thr Trp Leu			
965	970	975	
Cys Ile Cys Cys Cys Lys Arg Gln Lys Arg Thr Lys Ile Arg Lys Lys			
980	985	990	
Thr Lys Tyr Thr Ile Leu Asp Asn Met Asp Glu Gln Glu Arg Met Glu			
995	1000	1005	
Leu Arg Pro Lys Tyr Gly Ile Lys His Arg Ser Thr Glu His Asn Ser			
1010	1015	1020	
Ser Leu Met Val Ser Glu Ser Glu Phe Asp Ser Asp Gln Asp Thr Ile			
1025	1030	1035	1040
Phe Ser Arg Glu Lys Met Glu Arg Gly Asn Pro Lys Val Ser Met Asn			
1045	1050	1055	
Gly Ser Ile Arg Asn Gly Ala Ser Phe Ser Tyr Cys Ser Lys Asp Arg			
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<213> Homo sapiens

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Glu Lys Asp			

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 ggtgagagcg cagcaagtgc ttcaagcctgt cttgggcttg gtccagattc gtcctctgg 180  
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 aaaaacatca aaggaagctt gcacccaaact ctcttcaggg ccgcctcaga agcctgccat 600  
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 attttttaaa ctgttagatgtt ctgtttccat ctaaaacaaag aactcctgccc ttgatggatg 5760  
 gagggcaaat tctggggaa cttttggcc accgttggaaat tctattccca ggactaagag 5820  
 gaatttctt taatggatcc agagagccaa ggtcagaggg agagatggcc tgcatagtt 5880  
 cctgtggatc acaccggggc caccctccccc tctagggttta cagtgactt cttctgccc 5940  
 tcctcctttt ctgtccttgg ccatctcagc ctggcctctc tgatccttcc atcacagaag 6000  
 gatcttgaat ctctggaaa tcaaaacatca cagtagtgc gagaaggatgta gtctgtctt 6060  
 gtcacccat ttctcatcag aacaaagcag gagatggaaat gccaaccag cattcttcat 6120  
 ggtggactgc ttatcattga ggttggggg gagataaagc acgctaagag ctctggacag 6180  
 agaaaaacag gccctagaat atgggagttt gttttgttag ggctcatagg ctaacaagca 6240  
 cttagttgc tggtttacat tcaatgaagg aggattcata cccatggcat tacaaggcta 6300  
 agcatgtgtt tgactaagga actatctgaa aaacatgcag caaggtaaagaa aatgtacca 6360

ctcacaacaaggc cagtgtatgcc acctttgtgc cgccggggagg agagtgacta ccattgtttt 6420  
 ttgtgtgaca aagctatcat ggactatccc aatcttggtt ttattgtcta aaatatatta 6480  
 ttttcccta tgtgttgaca aggtatccc aatatcacac tattaaatat atgcactaat 6540  
 ctaaaataaaag gtgtctgtat tttctgtat gcttattttt agggggaaat ttgttttctt 6600  
 tatgcttcag ggttagggga ttcccttgag tataaggcag caaactctgg cctgcagcct 6660  
 gtgtgtgcac gccccatgag ccgaaaagtg ggtcttatgt tttcaatgg taaaaataaa 6720  
 ataaaaaaaaat ttgaaacatg tgaactataat gacattcaga ttgtgttca taaataaaagt 6780  
 ttattggaa catatcc 6797

<210> 272  
 <211> 1063  
 <212> PRT  
 <213> Homo sapiens

<400> 272  
 Met Thr Arg Leu Gly Trp Pro Ser Pro Cys Cys Ala Arg Lys Gln Cys  
 1 5 10 15  
 Ser Glu Gly Arg Thr Tyr Ser Asn Ala Val Ile Ser Pro Asn Leu Glu  
 20 25 30  
 Thr Thr Arg Ile Met Arg Val Ser His Thr Phe Pro Val Val Asp Cys  
 35 40 45  
 Thr Ala Ala Cys Cys Asp Leu Ser Ser Cys Asp Leu Ala Trp Trp Phe  
 50 55 60  
 Glu Gly Arg Cys Tyr Leu Val Ser Cys Pro His Lys Glu Asn Cys Glu  
 65 70 75 80  
 Pro Lys Lys Met Gly Pro Ile Arg Ser Tyr Leu Thr Phe Val Leu Arg  
 85 90 95  
 Pro Val Gln Arg Pro Ala Gln Leu Leu Asp Tyr Gly Asp Met Met Leu  
 100 105 110  
 Asn Arg Gly Ser Pro Ser Gly Ile Trp Gly Asp Ser Pro Glu Asp Ile  
 115 120 125  
 Arg Lys Asp Leu Pro Phe Leu Gly Lys Asp Trp Gly Leu Glu Glu Met  
 130 135 140  
 Ser Glu Tyr Ser Asp Asp Tyr Arg Glu Leu Glu Lys Asp Leu Leu Gln  
 145 150 155 160  
 Pro Ser Gly Lys Gln Glu Pro Arg Gly Ser Ala Glu Tyr Thr Asp Trp  
 165 170 175  
 Gly Leu Leu Pro Gly Ser Glu Gly Ala Phe Asn Ser Ser Val Gly Asp  
 180 185 190  
 Ser Pro Ala Val Pro Ala Glu Thr Gln Gln Asp Pro Glu Leu His Tyr  
 195 200 205  
 Leu Asn Glu Ser Ala Ser Thr Pro Ala Pro Lys Leu Pro Glu Arg Ser  
 210 215 220  
 Val Leu Leu Pro Leu Pro Thr Thr Pro Ser Ser Gly Glu Val Leu Glu  
 225 230 235 240  
 Lys Glu Lys Ala Ser Gln Leu Gln Glu Gln Ser Ser Asn Ser Ser Gly  
 245 250 255  
 Lys Glu Val Leu Met Pro Ser His Ser Leu Pro Pro Ala Ser Leu Glu  
 260 265 270  
 Leu Ser Ser Val Thr Val Glu Lys Ser Pro Val Leu Thr Val Thr Pro  
 275 280 285  
 Gly Ser Thr Glu His Ser Ile Pro Thr Pro Pro Thr Ser Ala Ala Pro  
 290 295 300  
 Ser Glu Ser Thr Pro Ser Glu Leu Pro Ile Ser Pro Thr Thr Ala Pro  
 305 310 315 320  
 Arg Thr Val Lys Glu Leu Thr Val Ser Ala Gly Asp Asn Leu Ile Ile  
 325 330 335  
 Thr Leu Pro Asp Asn Glu Val Glu Leu Lys Ala Phe Val Ala Pro Ala  
 340 345 350  
 Pro Pro Val Glu Thr Thr Tyr Asn Tyr Glu Trp Asn Leu Ile Ser His  
 355 360 365  
 Pro Thr Asp Tyr Gln Gly Glu Ile Lys Gln Gly His Lys Gln Thr Leu

370	375	380													
Asn	Leu	Ser	Gln	Leu	Ser	Val	Gly	Leu	Tyr	Val	Phe	Lys	Val	Thr	Val
385															
Ser	Ser	Glu	Asn	Ala	Phe	Gly	Glu	Gly	Phe	Val	Asn	Val	Thr	Val	Lys
405															
Pro	Ala	Arg	Arg	Val	Asn	Leu	Pro	Pro	Val	Ala	Val	Val	Ser	Pro	Gln
420															
Leu	Gln	Glu	Leu	Thr	Leu	Pro	Leu	Thr	Ser	Ala	Leu	Ile	Asp	Gly	Ser
435															
Gln	Ser	Thr	Asp	Asp	Thr	Glu	Ile	Val	Ser	Tyr	His	Trp	Glu	Glu	Ile
450															
Asn	Gly	Pro	Phe	Ile	Glu	Glu	Lys	Thr	Ser	Val	Asp	Ser	Pro	Val	Leu
465															
Arg	Leu	Ser	Asn	Leu	Asp	Pro	Gly	Asn	Tyr	Ser	Phe	Arg	Leu	Thr	Val
485															
Thr	Asp	Ser	Asp	Gly	Ala	Thr	Asn	Ser	Thr	Thr	Ala	Ala	Leu	Ile	Val
500															
Asn	Asn	Ala	Val	Asp	Tyr	Pro	Pro	Val	Ala	Asn	Ala	Gly	Pro	Asn	His
515															
Thr	Ile	Thr	Leu	Pro	Gln	Asn	Ser	Ile	Thr	Leu	Asn	Gly	Asn	Gln	Ser
530															
Ser	Asp	Asp	His	Gln	Ile	Val	Leu	Tyr	Glu	Trp	Ser	Leu	Gly	Pro	Gly
545															
Ser	Glu	Gly	Lys	His	Val	Val	Met	Gln	Gly	Val	Gln	Thr	Pro	Tyr	Leu
565															
His	Leu	Ser	Ala	Met	Gln	Glu	Gly	Asp	Tyr	Thr	Phe	Gln	Leu	Lys	Val
580															
Thr	Asp	Ser	Ser	Arg	Gln	Gln	Ser	Thr	Ala	Val	Val	Thr	Val	Ile	Val
595															
Gln	Pro	Glu	Asn	Asn	Arg	Pro	Pro	Val	Ala	Val	Ala	Gly	Pro	Asp	Lys
610															
Glu	Leu	Ile	Phe	Pro	Val	Glu	Ser	Ala	Thr	Leu	Asp	Gly	Ser	Ser	Ser
625															
Ser	Asp	Asp	His	Gly	Ile	Val	Phe	Tyr	His	Trp	Glu	His	Val	Arg	Gly
645															
Pro	Ser	Ala	Val	Glu	Met	Glu	Asn	Ile	Asp	Lys	Ala	Ile	Ala	Thr	Val
660															
Thr	Gly	Leu	Gln	Val	Gly	Thr	Tyr	His	Phe	Arg	Leu	Thr	Val	Lys	Asp
675															
Gln	Gln	Gly	Leu	Ser	Ser	Thr	Ser	Thr	Leu	Thr	Val	Ala	Val	Lys	Lys
690															
Glu	Asn	Asn	Ser	Pro	Pro	Arg	Ala	Arg	Ala	Gly	Gly	Arg	His	Val	Leu
705															
Val	Leu	Pro	Asn	Asn	Ser	Ile	Thr	Leu	Asp	Gly	Ser	Arg	Ser	Thr	Asp
725															
Asp	Gln	Arg	Ile	Val	Ser	Tyr	Leu	Trp	Ile	Arg	Asp	Gly	Gln	Ser	Pro
740															
Ala	Ala	Gly	Asp	Val	Ile	Asp	Gly	Ser	Asp	His	Ser	Val	Ala	Leu	Gln
755															
Leu	Thr	Asn	Leu	Val	Glu	Gly	Val	Tyr	Thr	Phe	His	Leu	Arg	Val	Thr
770															
Asp	Ser	Gln	Gly	Ala	Ser	Asp	Thr	Asp	Thr	Ala	Thr	Val	Glu	Val	Gln
785															
Pro	Asp	Pro	Arg	Lys	Ser	Gly	Leu	Val	Glu	Leu	Thr	Leu	Gln	Val	Gly
805															
Val	Gly	Gln	Leu	Thr	Glu	Gln	Arg	Lys	Asp	Thr	Leu	Val	Arg	Gln	Leu
820															
Ala	Val	Leu	Leu	Asn	Val	Leu	Asp	Ser	Asp	Ile	Lys	Val	Gln	Lys	Ile
835															
Arg	Ala	His	Ser	Asp	Leu	Ser	Thr	Val	Ile	Val	Phe	Tyr	Val	Gln	Ser
850															
Arg	Pro	Pro	Phe	Lys	Val	Leu	Lys	Ala	Ala	Glu	Val	Ala	Arg	Asn	Leu
865															
His	Met	Arg	Leu	Ser	Lys	Glu	Lys	Ala	Asp	Phe	Leu	Leu	Phe	Lys	Val

885	890	895
Leu Arg Val Asp Thr Ala Gly Cys	Leu Leu Lys Cys Ser Gly His Gly	
900	905	910
His Cys Asp Pro Leu Thr Lys Arg Cys Ile Cys Ser His	Leu Trp Met	
915	920	925
Glu Asn Leu Ile Gln Arg Tyr Ile Trp Asp Gly Glu	Ser Asn Cys Glu	
930	935	940
Trp Ser Ile Phe Tyr Val Thr Val Leu Ala Phe	Thr Leu Ile Val Leu	
945	950	955
Thr Gly Phe Thr Trp Leu Cys Ile Cys Cys Lys Arg Gln Lys		
965	970	975
Arg Thr Lys Ile Arg Lys Lys Thr Lys Tyr Thr Ile Leu Asp Asn Met		
980	985	990
Asp Glu Gln Glu Arg Met Glu Leu Arg Pro Lys Tyr Gly Ile Lys His		
995	1000	1005
Arg Ser Thr Glu His Asn Ser Ser Leu Met Val Ser Glu Ser Glu Phe		
1010	1015	1020
Asp Ser Asp Gln Asp Thr Ile Phe Ser Arg Glu Lys Met Glu Arg Gly		
1025	1030	1035
Asn Pro Lys Val Ser Met Asn Gly Ser Ile Arg Asn Gly Ala Ser Phe		
1045	1050	1055
Ser Tyr Cys Ser Lys Asp Arg		
1060		

<210> 273  
<211> 1053  
<212> PRT  
<213> Homo sapiens

<400> 273		
Cys Ala Arg Lys Gln Cys Ser Glu Gly Arg Thr Tyr Ser Asn Ala Val		
1	5	10
Ile Ser Pro Asn Leu Glu Thr Thr Arg Ile Met Arg Val Ser His Thr		
20	25	30
Phe Pro Val Val Asp Cys Thr Ala Ala Cys Cys Asp Leu Ser Ser Cys		
35	40	45
Asp Leu Ala Trp Trp Phe Glu Gly Arg Cys Tyr Leu Val Ser Cys Pro		
50	55	60
His Lys Glu Asn Cys Glu Pro Lys Lys Met Gly Pro Ile Arg Ser Tyr		
65	70	75
Leu Thr Phe Val Leu Arg Pro Val Gln Arg Pro Ala Gln Leu Leu Asp		
85	90	95
Tyr Gly Asp Met Met Leu Asn Arg Gly Ser Pro Ser Gly Ile Trp Gly		
100	105	110
Asp Ser Pro Glu Asp Ile Arg Lys Asp Leu Pro Phe Leu Gly Lys Asp		
115	120	125
Trp Gly Leu Glu Glu Met Ser Glu Tyr Ser Asp Asp Tyr Arg Glu Leu		
130	135	140
Glu Lys Asp Leu Leu Gln Pro Ser Gly Lys Gln Glu Pro Arg Gly Ser		
145	150	155
Ala Glu Tyr Thr Asp Trp Gly Leu Leu Pro Gly Ser Glu Gly Ala Phe		
165	170	175
Asn Ser Ser Val Gly Asp Ser Pro Ala Val Pro Ala Glu Thr Gln Gln		
180	185	190
Asp Pro Glu Leu His Tyr Leu Asn Glu Ser Ala Ser Thr Pro Ala Pro		
195	200	205
Lys Leu Pro Glu Arg Ser Val Leu Leu Pro Leu Pro Thr Thr Pro Ser		
210	215	220
Ser Gly Glu Val Leu Glu Lys Glu Lys Ala Ser Gln Leu Gln Glu Gln		
225	230	235
Ser Ser Asn Ser Ser Gly Lys Glu Val Leu Met Pro Ser His Ser Leu		
245	250	255
Pro Pro Ala Ser Leu Glu Leu Ser Ser Val Thr Val Glu Lys Ser Pro		

260	265	270
Val Leu Thr Val Thr Pro Gly Ser	Thr Glu His Ser Ile Pro Thr Pro	
275	280	285
Pro Thr Ser Ala Ala Pro Ser Glu Ser Thr Pro Ser	Glu Leu Pro Ile	
290	295	300
Ser Pro Thr Thr Ala Pro Arg Thr Val Lys Glu	Leu Thr Val Ser Ala	
305	310	315
Gly Asp Asn Leu Ile Ile Thr Leu Pro Asp Asn Glu Val	Glu Leu Lys	
325	330	335
Ala Phe Val Ala Pro Ala Pro Val Glu Thr Thr Tyr	Asn Tyr Glu	
340	345	350
Trp Asn Leu Ile Ser His Pro Thr Asp Tyr Gln Gly	Glu Ile Lys Gln	
355	360	365
Gly His Lys Gln Thr Leu Asn Leu Ser Gln Leu Ser	Val Gly Leu Tyr	
370	375	380
Val Phe Lys Val Thr Val Ser Ser Glu Asn Ala Phe	Gly Glu Gly Phe	
385	390	395
Val Asn Val Thr Val Lys Pro Ala Arg Arg Val Asn	Leu Pro Pro Val	
405	410	415
Ala Val Val Ser Pro Gln Leu Gln Glu Leu Thr Leu	Pro Leu Thr Ser	
420	425	430
Ala Leu Ile Asp Gly Ser Gln Ser Thr Asp Asp Thr	Glu Ile Val Ser	
435	440	445
Tyr His Trp Glu Glu Ile Asn Gly Pro Phe Ile	Glu Glu Lys Thr Ser	
450	455	460
Val Asp Ser Pro Val Leu Arg Leu Ser Asn Leu Asp	Pro Gly Asn Tyr	
465	470	475
Ser Phe Arg Leu Thr Val Thr Asp Ser Asp Gly Ala	Thr Asn Ser Thr	
485	490	495
Thr Ala Ala Leu Ile Val Asn Asn Ala Val Asp	Tyr Pro Pro Val Ala	
500	505	510
Asn Ala Gly Pro Asn His Thr Ile Thr Leu Pro	Gln Asn Ser Ile Thr	
515	520	525
Leu Asn Gly Asn Gln Ser Ser Asp Asp His Gln	Ile Val Leu Tyr Glu	
530	535	540
Trp Ser Leu Gly Pro Gly Ser Glu Gly Lys His	Val Val Met Gln Gly	
545	550	555
Val Gln Thr Pro Tyr Leu His Leu Ser Ala Met	Gln Glu Gly Asp Tyr	
565	570	575
Thr Phe Gln Leu Lys Val Thr Asp Ser Ser Arg	Gln Gln Ser Thr Ala	
580	585	590
Val Val Thr Val Ile Val Gln Pro Glu Asn Asn	Arg Pro Pro Val Ala	
595	600	605
Val Ala Gly Pro Asp Lys Glu Leu Ile Phe Pro	Val Glu Ser Ala Thr	
610	615	620
Leu Asp Gly Ser Ser Ser Asp Asp His	Gly Ile Val Phe Tyr His	
625	630	635
Trp Glu His Val Arg Gly Pro Ser Ala Val Glu	Met Glu Asn Ile Asp	
645	650	655
Lys Ala Ile Ala Thr Val Thr Gly Leu Gln Val	Gly Thr Tyr His Phe	
660	665	670
Arg Leu Thr Val Lys Asp Gln Gln Gly Leu Ser	Ser Thr Ser Thr Leu	
675	680	685
Thr Val Ala Val Lys Lys Glu Asn Asn Ser	Pro Pro Arg Ala Arg Ala	
690	695	700
Gly Gly Arg His Val Leu Val Leu Pro Asn Asn	Ser Ile Thr Leu Asp	
705	710	715
Gly Ser Arg Ser Thr Asp Asp Gln Arg Ile Val	Ser Tyr Leu Trp Ile	
725	730	735
Arg Asp Gly Gln Ser Pro Ala Ala Gly Asp Val	Ile Asp Gly Ser Asp	
740	745	750
His Ser Val Ala Leu Gln Leu Thr Asn Leu Val	Glu Gly Val Tyr Thr	
755	760	765
Phe His Leu Arg Val Thr Asp Ser Gln Gly Ala	Ser Asp Thr Asp Thr	

770	775	780
Ala	Thr Val Glu Val Gln Pro Asp Pro Arg Lys Ser Gly Leu Val Glu	
785	790	795 800
Leu	Thr Leu Gln Val Gly Val Gly Gln Leu Thr Glu Gln Arg Lys Asp	
	805	810 815
Thr	Leu Val Arg Gln Leu Ala Val Leu Leu Asn Val Leu Asp Ser Asp	
	820	825 830
Ile	Lys Val Gln Lys Ile Arg Ala His Ser Asp Leu Ser Thr Val Ile	
	835	840 845
Val	Phe Tyr Val Gln Ser Arg Pro Pro Phe Lys Val Leu Lys Ala Ala	
	850	855 860
Glu	Val Ala Arg Asn Leu His Met Arg Leu Ser Lys Glu Lys Ala Asp	
	865	870 875 880
Phe	Leu Leu Phe Lys Val Leu Arg Val Asp Thr Ala Gly Cys Leu Leu	
	885	890 895
Lys	Cys Ser Gly His Gly His Cys Asp Pro Leu Thr Lys Arg Cys Ile	
	900	905 910
Cys	Ser His Leu Trp Met Glu Asn Leu Ile Gln Arg Tyr Ile Trp Asp	
	915	920 925
Gly	Glu Ser Asn Cys Glu Trp Ser Ile Phe Tyr Val Thr Val Leu Ala	
	930	935 940
Phe	Thr Leu Ile Val Leu Thr Gly Gly Phe Thr Trp Leu Cys Ile Cys	
	945	950 955 960
Cys	Cys Lys Arg Gln Lys Arg Thr Lys Ile Arg Lys Lys Thr Lys Tyr	
	965	970 975
Thr	Ile Leu Asp Asn Met Asp Glu Gln Glu Arg Met Glu Leu Arg Pro	
	980	985 990
Lys	Tyr Gly Ile Lys His Arg Ser Thr Glu His Asn Ser Ser Leu Met	
	995	1000 1005
Val	Ser Glu Ser Glu Phe Asp Ser Asp Gln Asp Thr Ile Phe Ser Arg	
	1010	1015 1020
Glu	Lys Met Glu Arg Gly Asn Pro Lys Val Ser Met Asn Gly Ser Ile	
	1025	1030 1035 1040
Arg	Asn Gly Ala Ser Phe Ser Tyr Cys Ser Lys Asp Arg	
	1045	1050

<210> 274  
 <211> 1053  
 <212> PRT  
 <213> Homo sapiens

<400> 274
Cys Ala Arg Lys Gln Cys Ser Glu Gly Arg Thr Tyr Ser Asn Ala Val
1 5 10 15
Ile Ser Pro Asn Leu Glu Thr Thr Arg Ile Met Arg Val Ser His Thr
20 25 30
Phe Pro Val Val Asp Cys Thr Ala Ala Cys Cys Asp Leu Ser Ser Cys
35 40 45
Asp Leu Ala Trp Trp Phe Glu Gly Arg Cys Tyr Leu Val Ser Cys Pro
50 55 60
His Lys Glu Asn Cys Glu Pro Lys Lys Met Gly Pro Ile Arg Ser Tyr
65 70 75 80
Leu Thr Phe Val Leu Arg Pro Val Gln Arg Pro Ala Gln Leu Leu Asp
85 90 95
Tyr Gly Asp Met Met Leu Asn Arg Gly Ser Pro Ser Gly Ile Trp Gly
100 105 110
Asp Ser Pro Glu Asp Ile Arg Lys Asp Leu Pro Phe Leu Gly Lys Asp
115 120 125
Trp Gly Leu Glu Glu Met Ser Glu Tyr Ser Asp Asp Tyr Arg Glu Leu
130 135 140
Glu Lys Asp Leu Leu Gln Pro Ser Gly Lys Gln Glu Pro Arg Gly Ser
145 150 155 160
Ala Glu Tyr Thr Asp Trp Gly Leu Leu Pro Gly Ser Glu Gly Ala Phe

165	170	175
Asn Ser Ser Val Gly Asp Ser Pro Ala Val Pro Ala Glu Thr Gln Gln		
180	185	190
Asp Pro Glu Leu His Tyr Leu Asn Glu Ser Ala Ser Thr Pro Ala Pro		
195	200	205
Lys Leu Pro Glu Arg Ser Val Leu Leu Pro Leu Pro Thr Thr Pro Ser		
210	215	220
Ser Gly Glu Val Leu Glu Lys Glu Lys Ala Ser Gln Leu Gln Glu Gln		
225	230	235
Ser Ser Asn Ser Ser Gly Lys Glu Val Leu Met Pro Ser His Ser Leu		
245	250	255
Pro Pro Ala Ser Leu Glu Leu Ser Ser Val Thr Val Glu Lys Ser Pro		
260	265	270
Val Leu Thr Val Thr Pro Gly Ser Thr Glu His Ser Ile Pro Thr Pro		
275	280	285
Pro Thr Ser Ala Ala Pro Ser Glu Ser Thr Pro Ser Glu Leu Pro Ile		
290	295	300
Ser Pro Thr Thr Ala Pro Arg Thr Val Lys Glu Leu Thr Val Ser Ala		
305	310	315
Gly Asp Asn Leu Ile Ile Thr Leu Pro Asp Asn Glu Val Glu Leu Lys		
325	330	335
Ala Phe Val Ala Pro Ala Pro Pro Val Glu Thr Thr Tyr Asn Tyr Glu		
340	345	350
Trp Asn Leu Ile Ser His Pro Thr Asp Tyr Gln Gly Glu Ile Lys Gln		
355	360	365
Gly His Lys Gln Thr Leu Asn Leu Ser Gln Leu Ser Val Gly Leu Tyr		
370	375	380
Val Phe Lys Val Thr Val Ser Ser Glu Asn Ala Phe Gly Glu Gly Phe		
385	390	395
400		
Val Asn Val Thr Val Lys Pro Ala Arg Arg Val Asn Leu Pro Pro Val		
405	410	415
Ala Val Val Ser Pro Gln Leu Gln Glu Leu Thr Leu Pro Leu Thr Ser		
420	425	430
Ala Leu Ile Asp Gly Ser Gln Ser Thr Asp Asp Thr Glu Ile Val Ser		
435	440	445
Tyr His Trp Glu Glu Ile Asn Gly Pro Phe Ile Glu Glu Lys Thr Ser		
450	455	460
Val Asp Ser Pro Val Leu Arg Leu Ser Asn Leu Asp Pro Gly Asn Tyr		
465	470	475
480		
Ser Phe Arg Leu Thr Val Thr Asp Ser Asp Gly Ala Thr Asn Ser Thr		
485	490	495
Thr Ala Ala Leu Ile Val Asn Asn Ala Val Asp Tyr Pro Pro Val Ala		
500	505	510
Asn Ala Gly Pro Asn His Thr Ile Thr Leu Pro Gln Asn Ser Ile Thr		
515	520	525
Leu Asn Gly Asn Gln Ser Ser Asp Asp His Gln Ile Val Leu Tyr Glu		
530	535	540
Trp Ser Leu Gly Pro Gly Ser Glu Gly Lys His Val Val Met Gln Gly		
545	550	555
560		
Val Gln Thr Pro Tyr Leu His Leu Ser Ala Met Gln Glu Gly Asp Tyr		
565	570	575
Thr Phe Gln Leu Lys Val Thr Asp Ser Ser Arg Gln Gln Ser Thr Ala		
580	585	590
Val Val Thr Val Ile Val Gln Pro Glu Asn Asn Arg Pro Pro Val Ala		
595	600	605
Val Ala Gly Pro Asp Lys Glu Leu Ile Phe Pro Val Glu Ser Ala Thr		
610	615	620
Leu Asp Gly Ser Ser Ser Asp Asp His Gly Ile Val Phe Tyr His		
625	630	635
640		
Trp Glu His Val Arg Gly Pro Ser Ala Val Glu Met Glu Asn Ile Asp		
645	650	655
Lys Ala Ile Ala Thr Val Thr Gly Leu Gln Val Gly Thr Tyr His Phe		
660	665	670
Arg Leu Thr Val Lys Asp Gln Gln Gly Leu Ser Ser Thr Ser Thr Leu		

675	680	685
Thr Val Ala Val Lys Lys Glu Asn Asn Ser Pro Pro Arg Ala Arg Ala		
690	695	700
Gly Gly Arg His Val Leu Val Leu Pro Asn Asn Ser Ile Thr Leu Asp		
705	710	715
Gly Ser Arg Ser Thr Asp Asp Gln Arg Ile Val Ser Tyr Leu Trp Ile		
725	730	735
Arg Asp Gly Gln Ser Pro Ala Ala Gly Asp Val Ile Asp Gly Ser Asp		
740	745	750
His Ser Val Ala Leu Gln Leu Thr Asn Leu Val Glu Gly Val Tyr Thr		
755	760	765
Phe His Leu Arg Val Thr Asp Ser Gln Gly Ala Ser Asp Thr Asp Thr		
770	775	780
Ala Thr Val Glu Val Gln Pro Asp Pro Arg Lys Ser Gly Leu Val Glu		
785	790	795
Leu Thr Leu Gln Val Gly Val Gly Gln Leu Thr Glu Gln Arg Lys Asp		
805	810	815
Thr Leu Val Arg Gln Leu Ala Val Leu Leu Asn Val Leu Asp Ser Asp		
820	825	830
Ile Lys Val Gln Lys Ile Arg Ala His Ser Asp Leu Ser Thr Val Ile		
835	840	845
Val Phe Tyr Val Gln Ser Arg Pro Pro Phe Lys Val Leu Lys Ala Ala		
850	855	860
Glu Val Ala Arg Asn Leu His Met Arg Leu Ser Lys Glu Lys Ala Asp		
865	870	875
Phe Leu Leu Phe Lys Val Leu Arg Val Asp Thr Ala Gly Cys Leu Leu		
885	890	895
Lys Cys Ser Gly His Gly His Cys Asp Pro Leu Thr Lys Arg Cys Ile		
900	905	910
Cys Ser His Leu Trp Met Glu Asn Leu Ile Gln Arg Tyr Ile Trp Asp		
915	920	925
Gly Glu Ser Asn Cys Glu Trp Ser Ile Phe Tyr Val Thr Val Leu Ala		
930	935	940
Phe Thr Leu Ile Val Leu Thr Gly Gly Phe Thr Trp Leu Cys Ile Cys		
945	950	955
Cys Cys Lys Arg Gln Lys Arg Thr Lys Ile Arg Lys Lys Thr Lys Tyr		
965	970	975
Thr Ile Leu Asp Asn Met Asp Glu Gln Glu Arg Met Glu Leu Arg Pro		
980	985	990
Lys Tyr Gly Ile Lys His Arg Ser Thr Glu His Asn Ser Ser Leu Met		
995	1000	1005
Val Ser Glu Ser Glu Phe Asp Ser Asp Gln Asp Thr Ile Phe Ser Arg		
1010	1015	1020
Glu Lys Met Glu Arg Gly Asn Pro Lys Val Ser Met Asn Gly Ser Ile		
1025	1030	1035
Arg Asn Gly Ala Ser Phe Ser Tyr Cys Ser Lys Asp Arg		
1045	1050	1040

<210> 275  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer

<400> 275  
aattctccga acgtgtcacg ttt

<210> 276  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer  
  
<400> 276  
aaggcacgaa gacgaacacu uctt

24

<210> 277  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer  
  
<400> 277  
aactgaagac ctgaagacaa taa

23